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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,584	09/30/2003	Melissa Ann Clark	030627/267409	9953

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EXAMINER	
FELTON, MICHAEL J	

ART UNIT	PAPER NUMBER
1791	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/675,584	CLARK ET AL.	
	Examiner	Art Unit	
	Michael J. Felton	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *3,4,8,9,12-14,20-22,24-27 and 33-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3,4,8,9,12-14,20-22,24-27 and 33-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Information Disclosure Statement

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. Please see page 23 and 24 of the specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 22 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. The term "medium" in claim 22 is a relative term which renders the claim indefinite. The term "medium" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. In addition, the disclosure of "medium chain triglycerides" makes reference to a supporting document that is not of record and cannot be located by the examiner.

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 27.... rejected under 35 U.S.C. 103(a) as being unpatentable over Keith II et al. (US 3,251,365) in view of Irby Jr. et al. (US 3,390,686).

2. Regarding claim 27, 3, Keith II et al., disclose that cellulose acetate filters do not removal all the harmful constituents of tobacco smoke (col. 2, 15-1 7). One solution

disclosed is to use "well-known absorbents such as activated charcoal, alumina, natural and synthetic clays and silica gel" (col. 2, 23-30), and that these materials can be segregated from the cellulose acetate filter (col. 2, 70-72; col. 3, 1-5).. Keith II et al. also disclose a structure using two conventional filter plugs and forming a cavity between them, and the filter plugs can be made from plasticized cellulose acetate (col. 4, 7-39). However, Keith II et al. do not teach a compartment within the first section of filter material, a breakable capsule within the compartment, or a first filter section with outer and inner annular components.

3. Irby Jr. et al. disclose the incorporation of a breakable capsule within a filter section, including a filter section comprising an outer annular filter material surrounding a cavity and inner filter material (figure 2; col. 4, 1-17). The outer material is formed to create a cavity in which the capsule and inner material is located. It would have been obvious to one of ordinary skill in the art at the time of invention to combine the filter section of Irby Jr. et al., with its use of liquid smoke treating technique with the filter assembly of Keith II et al. because Keith II et al. suggests that cellulose acetate filters are not effective to removal all the harmful constituent of tobacco smoke, and it is well known, and well within the skill, of one in the art that one type of filter segment can be substituted for another type of filter segment in a filter assembly.

4. Regarding claims 3, 4, 33, Keith II et al. discloses the use of plasticized cellulose acetate tow with a denier per filament between 1.5 and 25, and with a total denier between 30,000 and 90,000. Although Irby Jr. et al. disclose using foam in the annular

first filter, it would have been obvious to one of ordinary skill in the art at the time of invention to have tried the more commonly used cellulose acetate tow.

5. Particle sizes are also disclosed as being between 8 and 50 mesh

6. Regarding claim 20, Irby Jr. et al. show a generally spherical shaped capsule in figure 2.

7. Regarding claim 21, Irby Jr. et al. disclose a capsule with a gelatin shell, a flavorant, and a diluting agent (water) (col. 3, 18-61).

8. Regarding claim 22, Irby Jr. et al. discloses that large capsules are made using conventional techniques used in the pharmaceutical industry. It would have been obvious to one of ordinary skill in the art that oils, including triglycerides, could be used as a dispersant instead of water and such dispersants are often used to dispense some pharmaceuticals (those not dissolvable in water). It would have been obvious that dispersing flavorings not soluble in water would have been more effective with oil based dispersants.

9. Regarding claims 24 and 25, Irby Jr. et al. disclose a capsule up to 0.12 inches (just over 3 mm), falling within the range of at least 3 mm, and less than 5 mm. (col. 3, 18-61).

10. Regarding claims 34-39, Irby Jr. et al. indicate that flavors, metal salts and activated charcoal (for altering smoke composition), and medicines can be added to the capsule. Lemon oil is one such flavor. (col. 3, 18-61). The examiner considers breath fresheners to be a subset of either medicines or flavors, and this would be obvious to one of ordinary skill.

11. Regarding claims 13, 14, 36, and 37 Keith II, et al., disclose activated carbon with a particle size of between 8 and 50 mesh (col. 5, 2-10), and adding between 85-100 mg of particles (col. 6, 30-55).

12. Regarding claim 8 Keith II et al. disclose a filter assembly with a length of 20 mm, comprising two 7.5 mm cellulose acetate tow filter sections and a 5 mm absorbent filled cavity.

13. Regarding claim 40, Irby Jr. et al. dose not disclose what percentage of the capsule's contents are flavoring. However, it would have been obvious to one of ordinary skill in the art to vary the amount of flavoring depending on the flavoring's potency and the desired design effect on the smoker.

14. Regarding claim 41, replacing one of the filter segments of Keith II et al. with the filter segment of Irby Jr. et al. would inherently change the particulate removal efficiency of the first versus the second filter segment.

15. Regarding claim 45, Irby Jr. et al. disclose using crimped paper along with capsules (col. 4, 1-20).

16. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keith II et al. (US 3,251,365) and Irby Jr. et al. (US 3,390,686) as applied to claims 27 and 9 above, in further view of Eichel (US 3,459,194).

17. Regarding claim 9, although Keith II et al. disclose a filter 20 mm in length, a longer filter is not expressly taught. However, it would have been obvious to one of ordinary skill in the art that a filter could be made longer to remove additional smoke

constituents, improving marketability, and that it is common in the art to have filters of various lengths. In addition, Eichel discloses a cigarette filter with a length of 38 mm, and that filters for cigarettes are typically 1:3 to 1:2 in relation to the length of the tobacco rod (col. 4, 61-70), teaching that the length of the filter may be varied.

18. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keith II et al. (US 3,251,365) and Irby Jr. et al. (US 3,390,686) as applied to claims 27 and 37 above, in further view of Frund (US 5,714,126). Keith II et al. and Irby Jr. et al. do not disclose the activity of the activated carbon. However, Frund discloses using activated carbon to remove harmful gasses, with an activity of at least 95 Carbon Tetrachloride Activity (col. 2, line 6). It would have been obvious to one of ordinary skill in the art at the time of invention to have used carbon with sufficient activity, as disclosed by Frund, to achieve removal of harmful gasses in the cigarette smoke.

19. Claims 41-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keith II et al. (US 3,251,365) and Irby Jr. et al. (US 3,390,686) as applied to claims 27 and 9 above, in further view of Schneider (US 5,979,459).

20. Although the combination of Keith II et al. and Irby Jr. et al. would product filter segments with different particulate removal efficiency, Schneider discloses a first filter segment made of cellulose acetate with a denier per filament of 2.1 or less (col. 2, 39-44) and a second filter segment made of cellulose acetate tow with a denier per filament of 8 with a resistance to draw of less than 20mm of water column (col. 2, 45-49).

Another embodiment is shown in figure 2, with a first filter plug (26) with a denier per filament of 2.1 adjacent to the tobacco, followed by a coaxial filter segment, also made of cellulose acetate tow, with a minimum denier pre filament of 3 (example 2). In each case, Schneider clearly shows the use of a first filter material with lower weight per unit length (lower denier per fiber, between 1.8 and 2.5 denier per fiber) than the second filter material (between 3.0 and 10 denier per fiber).

21. It would have been obvious to one of ordinary skill in the art at the time of invention to use the different filter segments described by Schneider in the filter of Keith II et al. and Irby Jr. et al. because Schneider teaches using segments with different fiber deniers to optimize ventilation and air flow within the filter. One of ordinary skill would have known this to be applicable to any cigarette filter assembly.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Felton whose telephone number is 571-272-4805. The examiner can normally be reached on Monday to Friday, 7:30 AM to 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJF

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